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ABSTRACT

This paper offers a vision, referred to as the "network" vision, and a new set of strategies for higher educational institution management to meet the challenges posed by social and economic changes of the near future in the 1990s. This vision conceives of the modern higher education institution as an information-intensive organization and suggests strategies for freeing scarce executive attention to address those key elements of campus life that create and sustain excellence. The paper describes this vision as the development of a smaller, diverse, and highly skilled administrative workforce optimizing administrative service, quality, productivity, and flexibility. The strategies outlined include: (1) generalization of employee job responsibilities; (2) investment in technologies that facilitate communication among members of the campus community; (3) organization of the campus technical environment from the viewpoint of the academic departmental administrator; (4) reliance on private organizations, where appropriate, for certain campus administrative services; and (5) creation of incentives for administrative employees to make decisions based on perceived campus impact. In summary, the paper claims that colleges and universities are uniquely complex organizations and that success in the 1990s will depend on the quality and execution of an institution's academic plan and on the quality of its administration. (Author/JB)

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The Association for the Management of Information Technology in Higher Education

# Sustaining Excellence in the 21st Century:

## A Vision and Strategies for College and University Administration

*by Richard N. Katz and Richard P. West*

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## *A Vision and Strategies for College and University Administration*

by

Richard N. Katz and Richard P. West

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# ACKNOWLEDGEMENTS

Someone once observed that "no good deed goes unpunished." This CAUSE professional paper supports that observation. *Sustaining Excellence in the 21st Century* was produced initially as a vision statement by senior administrative officials of the University of California (UC). UC's New Campus Administrative Support and Ancillary Services Planning Group was charged in 1990 with articulating a vision or framework for the initial administrative operations of campuses which the University hopes to open early in the next century. In fulfilling its charge, this task group produced a document that has assumed a life of its own and is influencing the administrative efforts of several existing UC campuses as well as other institutions. Since its release by the task group, more than 4,500 official copies of *Sustaining Excellence* have been requested and distributed throughout UC and beyond.

The current professional paper is our revision of UC's task force report, extending discussion that was designed for one university system to the wider field of higher education. We would like to thank our fellow members of this original task group for their substantial contribution to this effort:

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# *Sustaining Excellence in the 21st Century:*

## *A Vision and Strategies for College and University Administration*

by

**Richard N. Katz and Richard P. West**

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# PREFACE

*"The University has, over the past several years, undertaken the first major reorganization in its history. But this is not the end of the story. Organizational forms should always be subject to further study. They should survive only as they serve well the purposes of the institution. They should be changed whenever the change will be beneficial to the functioning of the University."*

Clark Kerr
Report of the President, University of California
July 27, 1962

College and university administrators face a different set of issues and opportunities in the 1990s than did their predecessors in the early 1960s. While the excitement and challenge of the planning process remain the same, both the educational needs of the American people and the institutions themselves have undergone dramatic change in the intervening quarter century. Most acutely, while enrollment demands strongly suggest the need for expanded campuses, at some universities like the University of California, broad economic, political, and demographic changes inform us that higher education will find it increasingly difficult to fulfill its mission through the addition of new funds at the margin.

To meet increasing educational needs in an era of resource constraints, the administrative environments of American campuses should be planned and designed under a new set of management philosophies and operating principles. *Sustaining Excellence in the 21st Century* describes a new administrative vision and supporting strategies that strive to enhance the focus on leadership, productivity, and service.

The vision represents a significant departure from existing cultural norms, structures, behaviors, and systems. In particular, it suggests the need for more widespread delegation of authority, rewards for employee risk-taking and initiative, an enhanced emphasis on service and quality, and increased reliance on the campus technological infrastructure and architecture.

More than ever, the success of campuses in creating and sustaining excellence will depend on the vision, talents, and energy of their leadership and faculty. In the face of increased environmental complexity, uncertainty, and constraints, this leadership will depend on a well-planned organizational and technical infrastructure and on a trained, diverse, and engaged workforce.

# 1
# Executive Overview

Higher education leaders and policy makers argue with increased frequency that the 1990s will be a decade of major change or conflict for U.S. colleges and universities.[1] The ability of U.S. colleges and universities to compete successfully for students and financial resources and to prosper in the face of shifting state and federal priorities will depend more than ever on the development and execution of well considered academic strategies. Such strategies are the purview of the faculty and academic administration, and are outside the scope of this document. Instead, this paper is premised on the belief that the outstanding administration of a college or university's business affairs can enhance the institution's pursuit of academic excellence.

*Sustaining Excellence in the 21st Century* assumes that U.S. college and university leaders have done an outstanding job in creating and nurturing the world's finest system of higher education. In the 1990s, this leadership will face increased environmental complexity, uncertainty, and constraints, and will need to rely on a well-planned organizational and technical infrastructure and on a diverse, engaged, and trained workforce. This environment suggests the need for a new administrative vision and, in particular, for changes to a campus's cultural norms, structures, behaviors, and systems. The environment in which colleges and universities operate in the 1990s will be characterized by:

- demographic and enrollment change,
- increasing competition for faculty,
- increasing pressures to constrain administrative costs,
- increasing regulatory and policy pressures,
- increasing transaction volumes and services expectations, and
- increasing influence of constituents.[2]

To meet the challenge posed by these external influences, colleges and universities must cultivate a continuous stream of leadership and develop an administrative infrastructure which is optimized for service, speed, quality, and productivity. Specifically, this paper describes a vision and a new set of strategies referred to as the "network" vision. This vision conceives of the modern higher education institution as an information-intensive organization, and suggests strategies for freeing scarce executive attention to address those key elements of campus life that create and sustain excellence. In this vision, the development of a smaller, diverse, and highly skilled administrative workforce optimizes administrative service, quality, productivity, and flexibility. The strategies for achieving such a vision include:

- generalization of employee job responsibilities;
- investment in technologies that facilitate communications among members of the campus community;
- organization of the campus technical environment from the viewpoint of the academic departmental administrator, and with a view to reducing redundant transactions and reliance on paper;
- reliance on private organizations, where appropriate, for certain campus administrative services, and
- creation of incentives for administrative employees to make decisions based on perceived campus impact, rather than from a more narrow, functional perspective.

Deceptively innocuous, the proposed vision signifies a major departure in the way many U.S. colleges and universities organize their administrative assets. First, the underlying strategies reflect the belief that the 21st century will demand an increasingly sophisticated leadership and campus mechanisms for stimulating the growth of future leaders. Just

as important, fulfilling the promise of the network organization will depend on the creation of a policy environment that enables and encourages decentralized initiative. Finally, this new administrative vision emphasizes the importance of investment in the campus information technology infrastructure, particularly data communications, as a key determinant of administrative excellence.

In summary, *Sustaining Excellence in the 21st Century* claims that colleges and universities are uniquely complex organizations and that success in the 1990s will depend on the quality and execution of an institution's academic plan and on the quality of its administration. Institution trustees, officers, and administrators must recognize the imperative need for outstanding leadership for their campuses and vest these leaders with the authority to take initiative. This leadership, in turn, must recognize the essential importance of administration to the achievement of the campus academic mission and of vesting administrative staff with increased authority to act.

Through the careful refinement and execution of key organizational, human resources, operational, and technological strategies—and through judicious alliances with elements of the business community—campus leaders can develop an administrative environment that can build on the new opportunities that will open to them in the coming decades.

---

[1]Clark Kerr, "Higher Education Cannot Escape History: The 1990's," in *New Directions for Higher Education: An Agenda for the New Decade*, Larry W. Jones and Franz A. Nowotny, eds. (San Francisco: Jossey-Bass, 1990), p. 12.

[2]K. Scott Hughes, Carol Frances, and Barbara J. Lombardo, *Years of Challenge: The Impact of Demographic and Work Force Trends on Higher Education in the 1990's* (Washington, D.C.: NACUBO, 1991).

# 2
# A Vision of College and University Administration for the 21st Century

Higher education institutions are highly complex organizations. Due to the diversity of institutional goals, the difficulty of achieving goal convergence, and the difficulty of measuring the impact of decisions, standard theories that apply to many private organizations are not adequate in describing organizational behavior in higher education. The influence of these characteristics on higher education administration is compounded by broad social and economic changes sweeping the country.

The challenge for campus leaders is to develop a vision of administration and supporting strategies that will foster campus excellence in the 21st century. Implicit in this challenge is the assumption that creating and sustaining institutional excellence will depend increasingly on the institution's academic strategy, faculty, business acumen, and leadership. The pressures for outstanding leadership and flexible, responsive organizational capabilities will rise as campuses work to position themselves for excellence.

## Influences on Higher Education Administration

Campus leaders will increasingly be influenced by a wide range of internal and external pressures. The ability of institutions to achieve and sustain international reputations for excellence will be determined, to a large extent, by the ability of their leaders to organize campus environments that foster instruction, research, and public service in the face of these pressures, which include: (1) sweeping demographic change, (2) increasing decision-making complexity and environmental uncertainty, (3) the increasing influence of constituents, (4) the pressure to reduce administrative costs, (5) centralizing influences, and (6) constraints on leadership.

### Sweeping Demographic Change

The authors of *Years of Challenge* argue effectively that the demographic changes in the United States will conspire to alter the concept of higher education. They identified such trends as

- reductions, with regional variations, in the traditional college-going population,
- increasing participation of women,
- increasing participation of minorities and foreign students,
- dwindling opportunities for career achievement for 35- to 54-year-olds, and
- continuing shifts in state and regional population.

By the year 2000, trends in population migration, birth rates, aging, and death rates will alter the composition and size of the U.S. work force and student body.[1]

The population increase in the 1990s is projected to be the smallest of any decade in the 20th century and will affect colleges and universities differently according to their locations and the student markets they draw from. Continuing their trends from the 1980s, most states in New England or in the midwestern and mid-Atlantic regions will experience little population growth in the 1990s. The sunbelt states of the south Atlantic and western regions are expected to continue a pattern of robust population growth. California and Florida will be population growth leaders, and each are expected to add more than 3 million people during the 1990s.[2]

For many colleges and universities, these demographic trends will result in shortages of students and employees, and will suggest cost-reduction strategies in their business affairs. In California, increasing enrollment pressures have caused all segments of the public university system to call for the addition of new campuses.

**Increased Decision-making Complexity and Environmental Uncertainty**

Since 1970, enrollment at U.S. colleges and universities has increased by more than 50 percent. At major research universities, each decade since the 1950s has witnessed the addition of more than 100 degree programs. Rarely are older and established degree programs eliminated or replaced in this process. At many U.S. colleges and universities, the number of employees grew during the past 30 years at rates exceeding enrollment growth—owing, in part, to the rapid growth of programs and research activities financed under federal contracts and grants.[3] At the University of California, for example, the number of total campus employees rose from 6,823 in 1951 to nearly 125,000 in 1989. According to the standards of economic activity by which private organizations are ranked, many of the nation's largest universities could now be listed among *Fortune* magazine's 500 largest industrial firms.

The growth in size and scope of college and university activities has created substantial decision-making complexity for trustees, policy makers, and administrators. Again at the University of California, in spite of twenty-three policy, bylaw, and standing-order changes approved since 1983 to delegate governing board authority, the regents of this nine-campus system continue to review, discuss, and/or act on more than 500 items annually.[4] This compares with fewer than 200 items considered annually by the directors of comparably sized private organizations.[5]

In addition to the increased complexity stemming from this growth in size and activity, the environment in which these institutions operate and the society they serve have also become increasingly complex. Since the 1960s, college and university leaders have witnessed the passage of comprehensive federal legislation such as the Clean Air Act and several rounds of major tax reform, and major state environmental laws such as the California Environmental Quality Act. The recently enacted Americans with Disabilities Act will impose major new requirements on America's campuses. During this same period, higher education bucked national trends by witnessing the significant increase in the number of its employees covered by collective bargaining agreements. These developments, new reporting requirements, and a host of new regulatory and oversight bodies have complicated nearly all college and university business activities, or have constrained already complex activities.

In a further complication, college and university leaders face increasing uncertainty as they strive to define their institutions' evolving regional, state, national, or global roles. Budgetary uncertainties, debate over the nature and role of federal sponsorship of university research, the increasing influence of ballot initiatives in setting state policy priorities, reapportionment, and other changes to the external political mosaic precipitated by such trends as term limitations will add uncertainty to the social environment of the 21st century.

**The Increasing Influence of Constituents**

As the scope and character of higher education's influence have grown over the past decades, so has the interest of others in the role, mission, strategies, and activities of colleges and universities. In 1989, for example, the University of California awarded its one millionth academic degree. The price of such success is increased responsibility. The increasing influence of higher education in the intellectual life of the state, nation, and the world carries with it the responsibility to consider and balance the interests of a broad spectrum of constituents. This responsibility is particularly acute during periods of economic scarcity.

In the 1990s, colleges and universities have the potential to become the predominant cultural, social, and economic influence in the communities they share. Forging and nurturing mutually beneficial relationships within the local community and with students, faculty, alumni, government, employees, business partners, and many others will be essential to the achievement of an institution's mission in the 1990s.

Fostering positive constituent relations is likely to become more challenging over time. The growth of colleges and universities will generate new stakeholders, new supporters, detractors, and special interests. The changes in the campus workforce will strengthen the influence of traditional constituents such as faculty, as shortages are experienced in several disciplines. The organizational structures, strategies, and culture of college campuses must recognize the multiplicity of constituents and be configured to foster broad support among those constituents.

**The Pressure to Reduce Administrative Costs**

In the United States, administrative and support costs amount to approximately 30 percent of public education institutional expenditures.[6] These costs lead the educational cost growth rate owing, in part, to their labor-intensive cost structure. The continued rise in the volume and complexity of administrative transactions will exacerbate this trend. As Lehigh University's Peter Likins argues, "tight budgets and increased public scrutiny and accountability constrain our ability to increase resources, principally staff, at the margin."[7] The combined pressures to retain academic programs while holding the line on tuitions, fees, and indirect costs for federal contracts and grants are forcing many U.S. colleges and universities to trim administrative costs aggressively. Faculty at Cornell University, for example, recently proposed a "productivity agenda" that would cut positions by four percent in exchange for faculty salary increases of 20

percent. The University of Michigan established a "priority fund" by reducing every unit's base budget by one percent for the purpose of reallocating resources to achieve "better internal balance."[8]

**Centralizing Influences**

One of the imperatives of multi-campus university planning has been the commitment to "strive deliberately to foster diversity among its campuses, so as to present the broadest range of high-quality educational opportunities to its constituents."[9] But in the past three decades, substantial pressures to centralize have developed with the passage of sweeping environmental legislation; the emergence of new regulations in virtually every area of campus activity; new federal accounting, disclosure, and reporting requirements; the creation of state-wide collective bargaining agreements; and other trends and events. In spite of continual efforts to delegate authority for decision-making, the plethora of laws, regulations, and centrally issued policies make the kind of bold leadership needed to foster campus diversity difficult to sustain. As one university president put it, "boldness does not lead to [career] longevity."[10]

**Constraints on Leadership**

A major effect of the described influences on higher education administration is the increased difficulty and insecurity of academic leadership positions: "Among the 56 United States institutions in the elite Association of American Universities (AAU), 20 have had a change in the chief executive's office since June 1989."[11] In addition to the increased pressures of the university presidency posed by increased complexity, constraints, and uncertainties, college and university leaders often cite the increasingly activist approach taken by many governing boards as a key contributor to presidential turnover. Being part of a university system is also cited by higher education analysts as a contributor to chief-executive stress and turnover, because of the likelihood of friction between campus presidents and system heads.[12]

While American institutions have continued to enjoy outstanding leadership, two trends in this area may affect higher education administration. First, it is generally believed that the tenure of U.S. college and university presidents is growing shorter. Second, the pool of potential presidential replacements is shrinking. A 1986 study by the American Council on Education indicates that half the conventional pool of candidates—provosts and academic vice presidents—said they would not accept a presidency.[13]

## The Imperative of a Decentralized Organization

Restated in light of the trends described above, the challenge facing campus leaders is to foster excellence through diversity in the face of increasing uncertainty, complexity, constraints, and demographic change. To meet this challenge will require the articulation of an organizational vision for colleges and universities in the 21st century, and the development of strategies designed to support this vision.

Colleges and universities have been described variously as adhocracies, organic organizations, clans, and organized anarchies,[14] as "amiable, anarchic, self-correcting collectives of scholars with a small contingent of dignified caretakers at the unavoidable business edge,"[15] and as being characterized by problematic goals, unclear technology, and fluid participation.[16]

In the 21st century, colleges and universities can no longer afford to be thus characterized. They will need organizational structures that mitigate complexity and uncertainty, encourage a continuous stream of leadership, and enable future campus leaders to build academic infrastructures that foster and sustain excellence in instruction, research, and public service.

Most of the theories of organization are based in economics and the behavioral sciences and relate organizational design alternatives to growth strategy, task predictability, the stability of the organization's operating technology, or the degree of task differentiation within the organization.[17] Most of these theories are based on the concept of "bounded rationality" or "cognitive limits," which views organizations as vertical decision-making hierarchies in which decisions are referred upward based on limitations of decision-making authority or information within specific organizational subunits.[18] The key elements of this hierarchical system of management by exception are: (1) the size of the organization; (2) the flow of information through the organization, and (3) the extent to which authority for action is delegated.

In essence, large organizations with highly centralized authority systems and/or incomplete access to information force decision-making up to higher levels. Under the complex, uncertain, and growth-oriented environment facing universities, considerable responsibility for decision-making is escalated in this manner to senior executives and governing boards. Unabated, this predisposition towards upward delegation creates the risk of overloading senior decision-makers. In the bureaucratic organizational model, a portion of this complexity is mitigated by a high degree of division of labor and through the specification of expected employee behaviors through rules and procedures. The use of rules and procedures[19], however, is limited to activities that can be anticipated and to which an appropriate set of predictable responses can be identified. In spite of the development of rules and procedures, "as task uncertainty increases, the number of exceptions increases until the hierarchy is overloaded. Then the organization must employ new design strategies."[20]

Organizations may reduce the number of exceptions that occur by choosing among alternative design strategies: (1) decreasing the reliance on rules through goal setting, (2) decreasing the reliance on rules through workforce professionalization, (3) creating slack resources, (4) creating self-contained tasks, (5) investing in information systems, and (6) fostering lateral relations.[21]

Due to higher education's unique shared governance model and to organizationally divisive tendencies inherent in scholarship,[22] it is difficult to impute a set of goals to the whole organization that meet standard consistency requirements.[23] College and university leaders typically "discover preferences through action more often than [they] act on the basis of preference."[24] While campus leadership must remain engaged with its various constituents, explicit goal setting is unlikely to be invoked as a central strategy for mitigating complexity or uncertainty.

Similarly, though creating slack resources by specifying lower performance levels will reduce the amount of information to be processed by the organization, this is not a viable design strategy for public universities in light of public scrutiny and accountability.

Hierarchical referral, rule setting and proceduralization, and avoidance of public embarrassment—the bureaucratic organizational model—have formed the basis of many large institutions' internal control strategies to date. This model depends on a high degree of labor specialization, tightly specified job responsibilities, narrow delegations of authority, and a complex procedural environment. Major problems associated with this organizational strategy include: (1) procedural redundancy; (2) substantial organizational layering; (3) a high reliance on paper and forms to document decisions, transactions, and approvals; and (4) diminished employee job satisfaction.

Within the bureaucratic model, productivity is degraded, in part, by the accretion of unnecessary tasks. Such accretion occurs for many reasons, such as the organization's tendency to "institute procedures to correct new problems without going back periodically and asking how the set of procedures may be pruned ...."[25] In addition, university bureaucracies, which are particularly labor intensive, are subject to what economists refer to as cost disease and growth force. The cost disease reflects the tendency of wages and salaries to rise independently of improvements in productivity. The growth force "drives up budgets even faster than cost-rise because of program additions and reluctance to reallocate money from old programs."[26]

The most effective organizational design strategies for college and university campuses in the next century are: (1) the creation of self-contained tasks through widespread decentralization and workforce professionalization; (2) the investment in information technologies to place information for decision-making close to the lowest competent organizational level; and (3) the creation of lateral relations through project teams and task groups to remove overloads from the formal organizational hierarchy.

Consistent with an emphasis on service, the strategy of self-containment shifts the focus of management attention and authority from inputs to outputs.[27] By professionalizing and generalizing employee responsibilities, the competition for scarce skill specialties is reduced. At the same time, decreasing the division of labor makes it possible to eliminate redundancies across specialized subunits and reduce layers in the organizational hierarchy.

Investing in information systems reflects an organization's investment in mechanisms to facilitate the processing of information acquired during task performance without overloading the hierarchical communication channels. As more information is made available at deeper organizational levels, fewer exceptions must be generated.

The creation of lateral relations is the selective employment of decision processes that cut across lines of vertical authority. This strategy "moves the level of decision-making down to where information exists rather than bringing it up to the points of decision."[28] This strategy distributes decision-making activities without creating self-contained groups. In the university setting, this strategy suggests the increased reliance on cross-functional task groups and project teams as an effective means of removing overloads from the hierarchy.

## The Network Model

To develop campus organization designs that mitigate some of the complexities that will face college and university leaders in the 21st century—while fostering a productive and service-oriented culture—campus executives may wish to consider the following vision as an alternative to the existing bureaucratic model. This model is based on the concepts and theories described and reflects the operating strategies of many leading private organizations, colleges, and universities. This vision can be referred to as the network model of organization. The term "network" underscores the potential of this organizational form to relieve administrative overload and increase operational effectiveness and integration through decentralization, enhanced use of lateral relations, and reliance on emergent information technology capabilities.

The network model recognizes the organization as an information system[29] and emphasizes the strategies of task self-containment, information technology investment, and enhancement of lateral relations. This model eliminates layers of hierarchy by decentralizing the authority for decision-making, by increasing managerial spans of organizational

control, and by imbedding internal controls within integrated information systems. Responsibility and authority in network organizations are delegated to the lowest competent level. In the context of higher education, all delegated responsibilities should be reviewed for possibilities for further delegation. Within campuses, decision-making authority and the locus of administrative activity should be shifted, wherever possible, to the departmental level for most day-to-day operations.

The network model is an organizational vision and form that optimizes for flexibility, speed, and service. In this vision, the administration of college and university campuses will need to be composed of sophisticated problem solvers and service providers who have the authority to act. From the leadership perspective, governing boards, executives, and central campus administrators provide general administrative leadership by undertaking "strategic thinking"[30] and by developing policies and guidelines for the conduct of university business. The emphasis, in this organizational model, is on judgment and accountability, not on procedure.

Another major element of network organizations is the selective reliance of such organizations on the marketplace for performing many of their necessary activities.[31] The reliance on relational contracting for services can improve the administrative cost structure of campuses and the quality of services delivered to the campus community. Just as important, such outsourcing can reduce managerial complexity and enhance administrative flexibility.

## Leadership, Productivity, and Service

The leaders of campuses of the future will enjoy the unique opportunity to build and develop flexible, responsive administrative organizations. In spite of the complexities facing them, these leaders will need to focus continual attention on developing a management philosophy that will form the basis of their campuses' "psychological contracts" with employees.[32] Elements of this philosophy might include (1) an expressed vision of the goals and emphasis of the campus administrative organization, (2) strategies for organizing campus administrative activities, (3) beliefs and attitudes that will form the basis of the developing administrative culture, (4) a philosophy of internal control that communicates the balance sought between risk-taking and the levels of delegation and proceduralization, and (5) a set of human resources strategies that specify expected employee behaviors and communicate the campuses' means of fostering them.

This management philosophy will shape an administrative culture that will influence the campus for many years. Culture consists of the values, beliefs, and norms that foster behavioral consistency among individuals in an organization. While much has been written about the culture of the academic community, the culture of campus administrative organizations is not well understood. Most recently, campus administrative culture has been described in terms of its tendencies to assimilate the academic consultative and deliberative processes and governance models, and to foster beliefs in an "implied administrative tenure."[33] While these beliefs and attitudes are not echoed in formal administrative personnel policies, they are easily formed on college and university campuses and are difficult to supplant.

For the network model to succeed, leaders must develop a management philosophy, strategies, and infrastructure that will create and foster a productive and service-oriented culture. To shift the orientation of the campus administrative units towards service, any statement of philosophy should formally identify the faculty, students, college president, alumni, governmental authorities, and other administrative units as constituents of the administration. In particular, administrative systems and operations should be integrated and optimized from the viewpoint of the academic department administrator. Where possible, administrative operations, organizational forms, and reward systems should be organized around outputs rather than inputs. Service-level standards and objectives of the central administrative units should be communicated throughout the campus.

In addition, a long-standing commitment to making the "optimum use of resources"[34] should be reinforced as a defining element of the campus administrative culture. Investments in campus and inter-campus data communications networking and in the integration of administrative information systems are two strategies that will help campuses employ institution-wide resources effectively. Investments in human resources activities that foster the professionalization of the administrative workforce will provide the human infrastructure needed to support increased emphasis on service, leadership, and productivity. Because deeper delegation of authority for action can increase the risk of administrative failures, a clear institutional commitment to education and training programs for employees is key to the professionalization process in this era of broad demographic change. Finally, the reward systems of the university must reinforce a culture that stresses risk taking, initiative, personal accountability, outcomes, collaboration, and service. The attributes of the proposed vision of college and university administration are summarized in Figure 1 below.

The successful adoption of this network vision requires a number of tools and operational strategies, the major elements of which are: (1) an information technology strategy, (2) enhanced institutional business partnerships, (3) operational integration, and (4) human resources strategies.

## Enabling Strategies

Through the careful refinement and execution of key technological, organizational, operational, and human resource

strategies—and through judicious alliances with elements of the business community—campus leaders can develop an administrative environment that can build on the new opportunities that will open to them in the coming decades.

**Information Technology Strategy**

One strategy that is central to the achievement of productivity goals and which preconditions the establishment of a network organization is an information technology strategy. To shift the locus of administrative activity to the departmental level, where services are typically consumed, departmental administrative staff require easy access to central campus administrative services. An information technology strategy capable of providing this access would have four major elements:

- access to all appropriate central administrative systems via networks,
- distributed online transaction processing capabilities with a common interface between departments and central systems,
- integration of appropriate central systems, and
- deployment of paper-reducing technologies where cost effective.

The diagrams in Figure 2 on the following pages suggest an idealized evolutionary path for the implementation of this strategy.

As these illustrations show, a *fully developed campus local area network* (LAN) is central to the overall information technology schema. Universal access to the LAN by administrative (departmental and central) employees, students, faculty, vendors, and others will help define the future administrative landscape.

The need for widespread access to high-volume transaction processing administrative systems dictates a major emphasis on campus network development as a necessary infrastructure element. The size of administrative systems, the introduction of remote multimedia access, and pricing trends in hardware, software, and cable suggest a commitment to campus-wide use of fiber optics or other high speed network media. High speed cable should connect every administrative workstation, dormitory, and student service facility. Campus access to external networks is essential to promote cost-effective relations with schools, vendors, and external computing resources.

The second element of the information technology strategy is *commitment to online transaction processing*, which can lower the costs of administration by eliminating redundant recordkeeping. When data in central batch systems are not current, departments turn to stand-alone systems to meet their information needs between central processing cycles. Duplicate entry of data and the eventual reconciliations

**Figure 1**

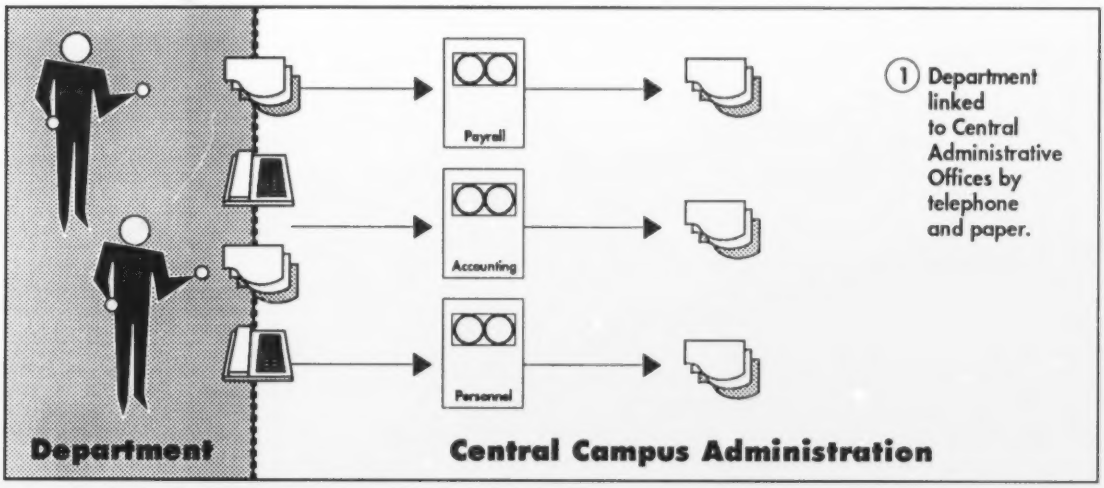
**ATTRIBUTES OF ALTERNATIVE ADMINISTRATIONS**

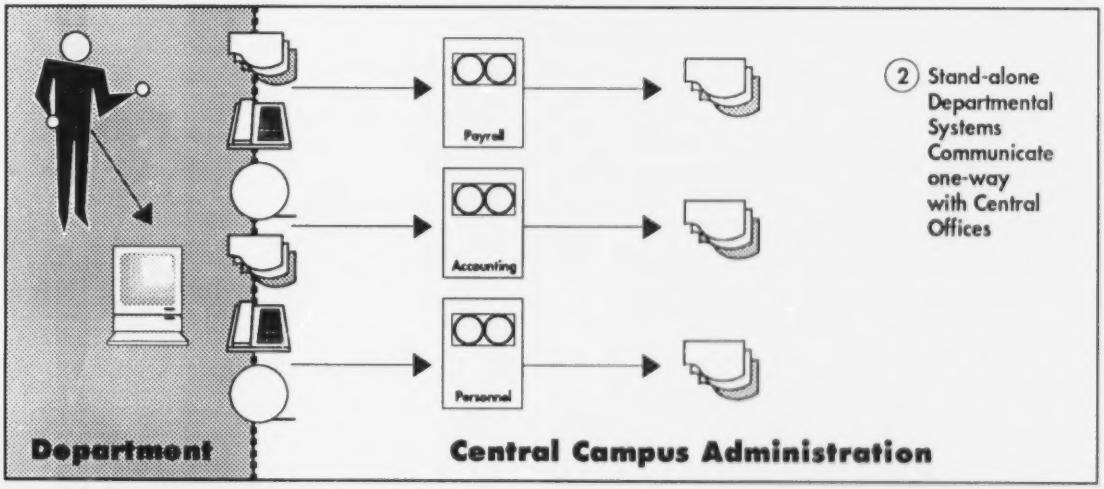
| Existing Environment (Bureaucratic) | Proposed Vision (Network) |
|---|---|
| focus on central administration | focus on department |
| reliance on policy, procedure | guidelines and accountabilities |
| specific and narrow delegations of authority at high institutional level | delegations at lowest competent level |
| specialized labor | emphasis on generalists |
| rewards for individual performance | rewards for team performance |
| fragmented central services | integration of operations |
| answer shopping | one-stop shopping |
| small span of control | large span of control |
| deep hierarchy | shallow hierarchy (flat) |
| focus on function optimization | focus on system optimization |
| civil service culture | service culture |
| rewards for working hard | rewards for achieving defined objectives |
| merit pay for professionals | merit pay for all (where possible) |

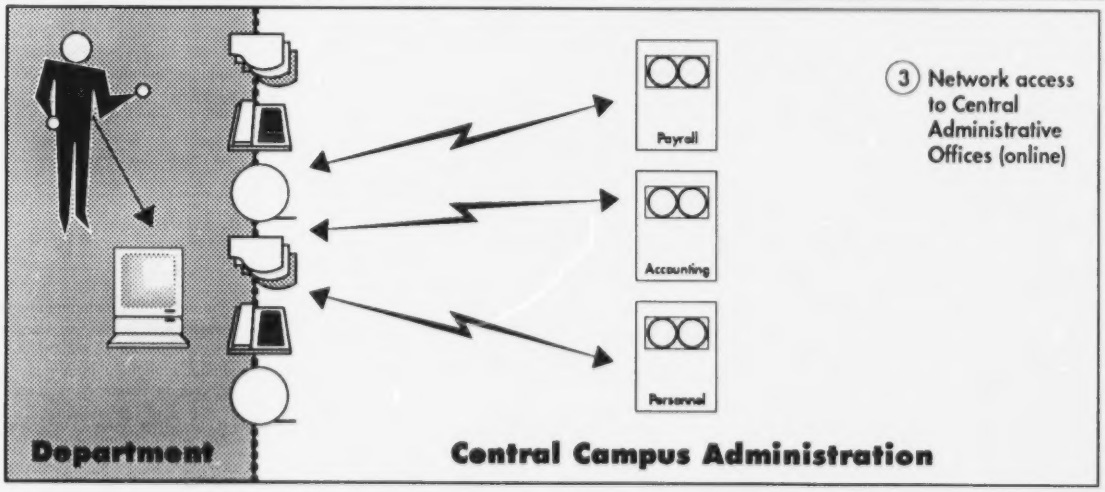
Figure 2

ESTABLISHING A NETWORKED ORGANIZATION

An Implementation Evolution

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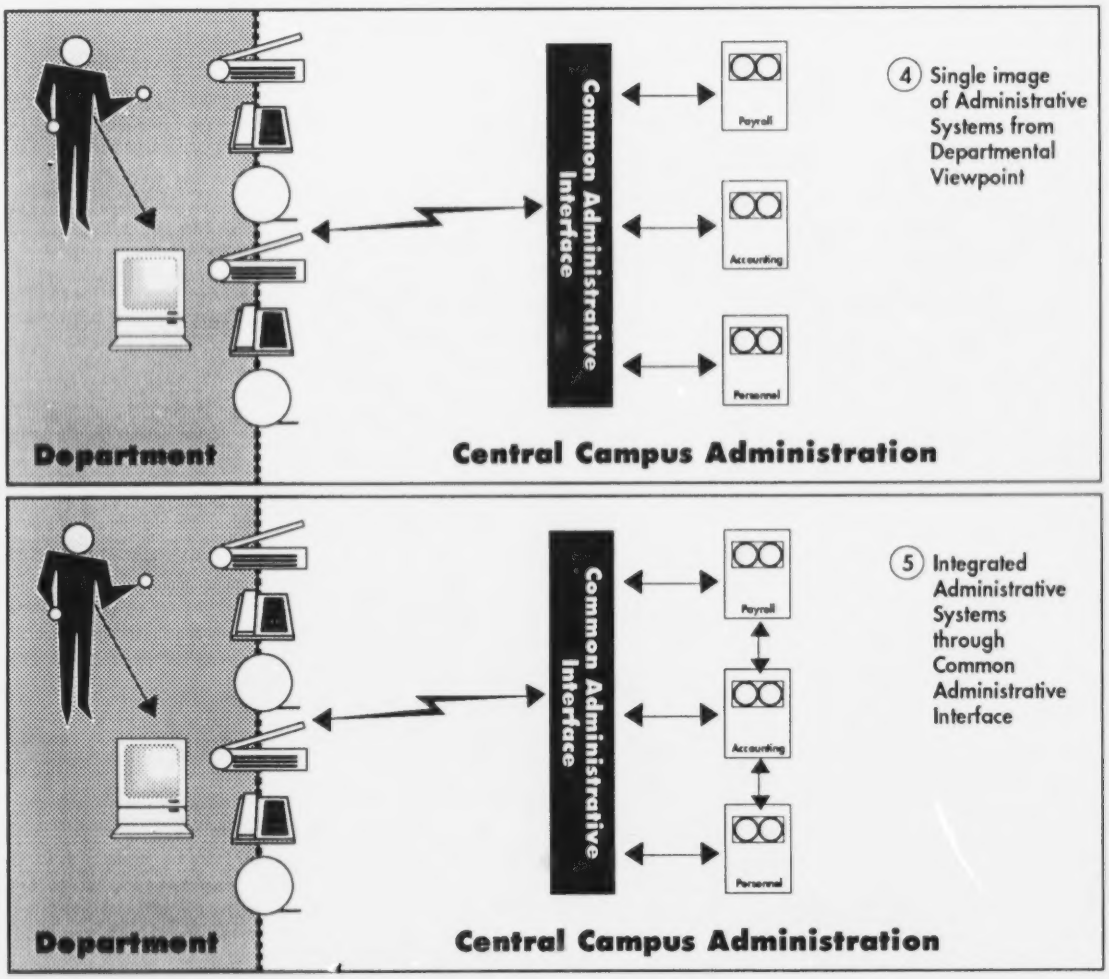
among redundant systems contribute measurably to campus productivity losses. In addition, disparate central information systems require specialization among departmental staff due to differences in technical design and approaches. The implementation of a common interface across all central systems would give department personnel a unified and consistent view of the central administration. Such an interface would not require conversion of existing systems, but would increase productivity by lowering unit training costs and permitting the evolution of departmental generalists (professionalization).

The next logical element of this strategy is the *integration of appropriate systems.* Comprehensive enrollment management, an essential element of competitive and service strategies, can be enabled once admissions, financial aid, class enrollment, and other systems are integrated. Integrating such systems on one campus with comparable systems in other segments of education may also enable further improvements in productivity and in service delivery. Integration of information systems will further reduce the volume of transactions by eliminating redundancies and reconciliations while increasing the quality of institutional data.

The fourth element of the information technology strategy is *deployment of new paper-reducing technologies.* Paper-based transactions continue to account for nearly 50 percent of administrative transactions. More important, they account for nearly 80 percent of the clerical effort. Transactions requiring paper can be performed by only one person at a time, adding considerable time and transit expense to administrative activities at the expense of service. The implementation of electronic authorizations, imaging, and electronic data interchange (EDI) will make significant productivity improvements possible.

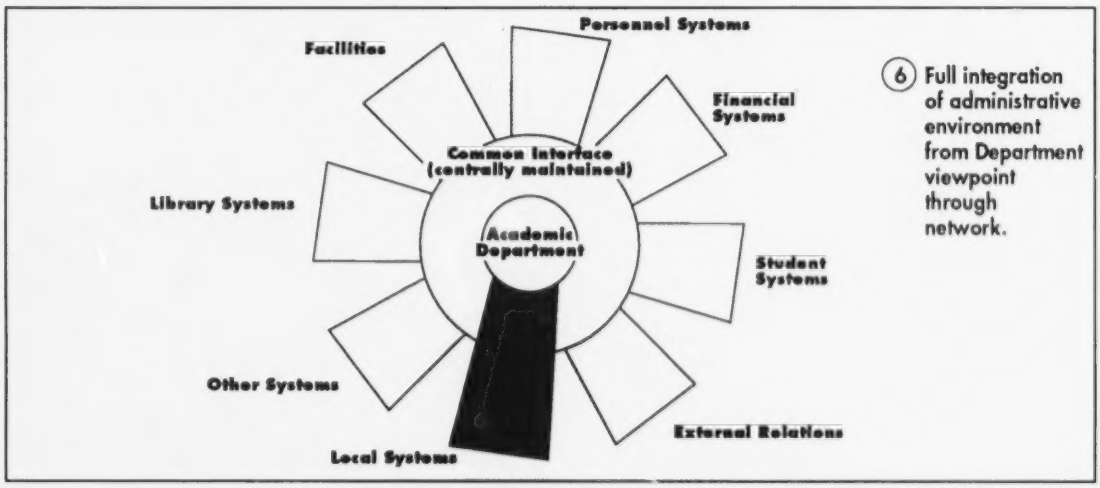
Implementing the above information technology strategy will help eliminate organizational levels by allowing consistent access to up-to-date information for interdependent staff, departments, and supervisors. The organizational spans of control can be increased by deeper delegation of authority. Improved data quality reduces further the need for staff



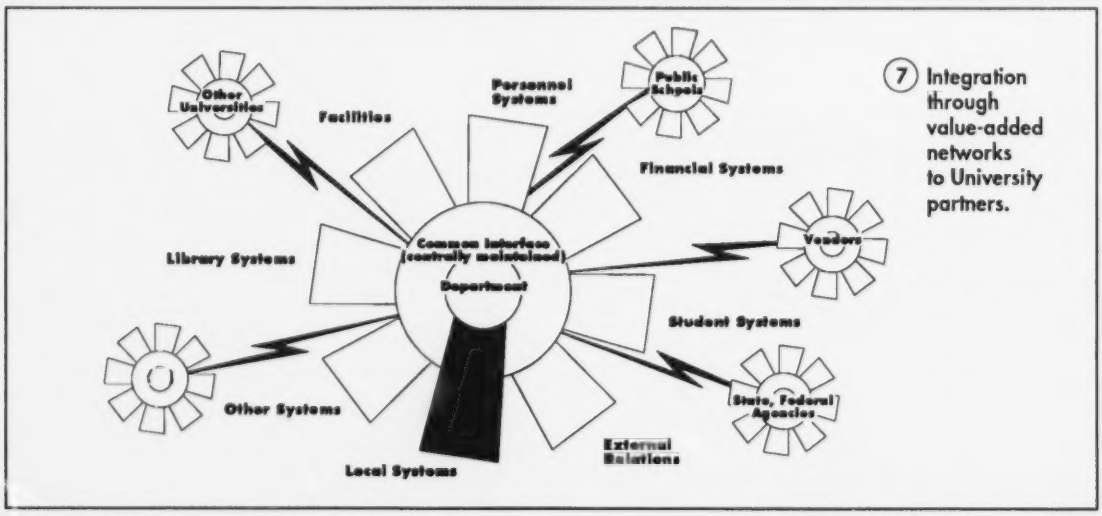
effort and supervisory intervention. Improvements in the speed and accessibility of data reduce complaints about delays in reports and increase productivity. Most important, the new technologies and strategy elevate departmental employees to higher professional levels and promote service while preserving and enhancing the central administration's control of institutional resources. Because both the central systems and the network remain institutional responsibilities, the controls and standards needed to maintain quality and reduce risk can be implemented largely through the systems and networks. These systems and networks form the locus of financial and administrative controls. Transaction histories and other forms of audit trail should be maintained in machine-readable form wherever possible.

Naturally, implementing this information technology strategy requires institutional investments in resources and support for each of the areas identified, even as it yields benefits in efficiency and effectiveness. For example, improved network access and price/performance of hardware may reduce the contention for computing cycles and the unit cost of administrative computing. While the unit cost of hardware maintenance may also decrease due to ongoing manufacturing improvements and shorter technology life cycles, total costs in this area will rise significantly as the size of the campus installed base of networked equipment increases.

Improvements in software will occur, but generally at a much slower rate. The cost of maintaining the software environment is likely to rise significantly because of widespread access, increased user sophistication, and the complexity of new mixed-media technologies. Similarly, while advances in end-user interfaces will reduce individual training costs in many areas, overall administrative requirements in the training area will rise. Administrators will face increased need for standards and difficulty in maintaining them. Rapid obsolescence of hardware and software will create significant heterogeneity in the technology base and complicate maintenance and training requirements. New funding strategies must be developed to support these anticipated needs.




6 Full integration of administrative environment from Department viewpoint through network.




7 Integration through value-added networks to University partners.

*The authors would like to acknowledge that the "wheel" as depicted in these two panels was invented by David J. Ernst of UC San Francisco and Cedric S. Bennett of Stanford University, and first appeared in the March 1983 Stanford report "Administrative Systems Architecture."*



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Administrative leaders must concentrate on managing the economic and technical life cycles of the campus technology base, and will have to pay increasing attention to organizing and administering institutional data. Information management professionals will become increasingly important in this environment.

**Private-Public Business Partnerships**

Increasingly, as a means of controlling costs and achieving maximum management flexibility, organizations are looking to third parties to supply many administrative services previously operated in-house. Universities are becoming aware of this opportunity. Outsourcing, or privatizing, administrative services may be an important element of the operational strategy for campuses of the future. Strategic management of campus business partnerships requires both a systematic approach to producing or acquiring goods and services, and strategic alliances.

Campus leaders should recognize the strategic importance of the "make/buy" decision and should encourage the development of analytical models for making such decisions on a systematic basis. Such models should identify the criteria on which to base "make-buy" decisions. One model, developed by UC Berkeley economist Oliver Williamson, identifies a framework for making the outsourcing decision based on transaction costs (see Figure 3, next page). In this model, commonplace and transaction-intensive functions, such as fleet services and reprographics, may be logical candidates for outsourcing.[35] Activities that are unique to the institution, such as employee relations, should be operated in-house. Infrequently performed tasks of a somewhat specific nature might be performed by a vendor operating under a sole source agreement, for example executive recruiting.

To support this priority, managerial rewards should reflect the goals of delivering the highest levels of service at the lowest cost. Currently, employee rank and status are often allocated on the basis of resources under direct managerial control. Such incentives can discourage the consideration of potentially superior organizational alternatives, particularly the use of the marketplace.

Another personnel consideration is that a considerable shift towards outsourcing will require strong on-campus contract administration skills. Strategies for recruiting and developing outstanding contract administrators are needed.

Outsourcing is a particularly important enabler of the network organizational vision because the judicious use of third parties supports increased spans of control by leveraging staff. Fewer managers are needed to administer third-party contracts than to manage operations directly. While the decision to outsource should remain the responsibility of operating management, institutional guidelines should be established and monitored to ensure that economic analyses are performed regularly.

By relying more heavily on business resources within the broader community served by a campus, outsourcing has the potential to strengthen ties with local businesses. The institution's traditionally positive role as a consumer of local business services can be enhanced through the introduction and support of new technologies such as EDI and through campus access to the data communications networks used by service providers.

At least as significant, a second broad strategy—or set of strategies—for enhancing campus administrative performance and for fostering strong links to the business community is the establishment of strategic alliances or partnerships. Partnerships for joint research, development, or ongoing operations have the potential to draw together academic, administrative, and industrial interests in ways that reinforce higher education's objectives for administrative productivity and for technology transfer.

American colleges and universities have a long tradition of pursuing collaborative research with the private sector. The ties between California's Silicon Valley and Stanford University are often singled out as one of the major factors influencing that university's reputational rise in the past three decades. From the corporate perspective, higher education's participation in partnerships provides broad support for economic development regionally and nationally. The potential roles of colleges and universities in promoting mutually beneficial economic development can include:

- human resource development,
- economic policy analysis,
- capacity building,
- technical assistance,
- research to develop new knowledge,
- transfer of newly developed knowledge, and
- support for developing new knowledge-based businesses.[36]

From a more parochial perspective, such partnerships bring colleges and universities investments in infrastructure and facilities, often filling gaps left by the significant reductions in federal support for plant and equipment in the past two decades.

While partnerships between higher education and industry chiefly characterize the academic mission and operations, opportunities for mutual benefit through partnership also await the innovative administrator. Several colleges and universities, for example, are forging links with publishers to develop and offer just-in-time textbook production through bookstore and reprographics operations. These partnerships reduce a college's inventory costs and risk, while providing new levels of support to faculty and students. Others are

establishing or considering contractual and electronic links with their suppliers in an effort to enable electronic shopping and purchasing at employees' desktops. Still others are contracting with business partners to develop and exchange online product information—chemicals, for example—to enhance employee access to safety and environmental health information. Finally, owing to the robustness of their institutional data communications networks, many colleges and universities are positioned to serve as test sites for a variety of technology tools to enhance productivity and distribute decision-making capabilities.

**Figure 3**

**CRITERIA FOR OUTSOURCING**

| | | ASSET/SERVICE/ACTIVITY CHARACTERISTICS | | |
|---|---|---|---|---|
| | | **Nonspecific** | **Mixed** | **Idiosyncratic** |
| FREQUENCY | **Occasional** | Use Commercial Provider | Contracts | Contracts |
| | **Recurrent** | Use Commercial Provider | Joint Ventures, Affiliation Agreements, etc. | Perform Internally |

**Operational Integration**

Integration of operations is essential to support the network organization and service culture. New information technology will allow future campus leaders to work efficiently through multi-functional clusters of interrelated activities (e.g. financial aid, registration, housing). But developing administrative and ancillary service operations that optimize quality, throughput, and flexibility without increasing risks requires clear, consistent individual and organizational performance standards and service level objectives. Interdependencies among administrative units (payroll, personnel, accounting, information systems) should be identified, and the linkages between them should be strengthened. Strategies that foster such linkages might include (1) the creation of ongoing cross-functional teams, (2) the recognition of the need for physical proximity during the space planning of administrative offices, (3) the adoption of team-oriented reward systems, and (4) the encouragement of cross-functional transfer career development strategies. Well-integrated cross-functional units are considered to be highly effective information processors and disseminators, and support the broader organizational strategies of workforce professionalization and the creation of lateral relations.

Central operations should be configured, where possible, to create a consistent and cohesive view of services from the departmental perspective. Again, this requirement will be satisfied, in part, by developing standard user interfaces in information systems. Such standardization must be accompanied by ongoing efforts to eliminate redundancies and to create and implement campus-wide performance standards.

To facilitate the shift of performance objectives from input activities to individual and organizational outcomes, service and control objectives should be clearly communicated. Periodic, ongoing assessment of service delivery against established criteria and benchmarks should be a planned element of the administrative and ancillary services infrastructure.

One specific operational strategy that fosters both productivity and service is referred to as fast-cycle capability—an "organizational capability and a level of performance that builds speed into the organization's operating system and the attitudes of its employees." Fast-cycle capability optimizes organizational activities by designing and enforcing organizations that perform without bottlenecks, delays, or errors. Such organizations are highly integrated systems in which operational units are linked. They make the main flow of operations visible and comprehensible to all employees and compensate, to a large extent, on the basis of group success. The systemic nature of the organization is reinforced in the operations and systems architecture.[37]

Multifunctional teams are increasingly popular in colleges and universities to collapse time requirements for projects. Such teams assimilate the specialized functional knowledge of team members, and incorporate and reconcile cross-functional perspectives at the stage of project definition and design. In fast-cycle organizations, multifunctional teams are used for everyday work at all levels, not just for special projects. Reward systems are configured to recognize team results.

Fast-cycle organizations emphasize breadth of knowledge among their employees and use time as the critical performance measure. Responsibility for actions is placed as far down in the organization as possible. The organization charts of fast-cycle organizations closely resemble a system flow chart, with arrows and feedback loops indicating the actual paths of decisions and work.

**Human Resources Strategy**

To achieve maximum flexibility, the administration of campuses of the future will need to be composed of sophisticated problem solvers who have easy access to their constituents and the authority to act. Multi-layered hierarchies can diffuse

accountability for decisions and actions and retard the speed and flow of critical information and decisions.

New network technology will make it possible to flatten the future campus administrative organization. Central administration will provide general administrative leadership by developing policies and guidelines for administration of business. Emphasis in this new environment will be on employee judgment and accountability, not on procedure.

In addition to relying on information technology, partnership strategies, and operational integration, campus leadership must develop human resources strategies and programs to reinforce service norms and maintain productivity. Key enabling elements of a strategic human resources strategy include:

- accountability systems,
- organization design,
- staff and management development, and
- reward systems.

The accountability system includes campus policies, controls, procedures, delegations, and evaluation systems. Administrative leaders must monitor and manage the accountability systems and align these systems with campus service and control objectives. Even though new information technology will enable many service improvements while enhancing controls, hard tradeoffs must be made. Campus leaders, trustees, auditors, and funding agencies must develop philosophies of internal control that recognize the inherent tradeoffs between risk-taking and administrative overhead. Wherever possible, employee judgment should replace procedure.

A second element of this strategy is organizational design. Network organizations should be designed to reflect the following priorities:

- increased dependence on generalists,
- expanded breadth and scope of job descriptions,
- deeper delegations of authority,
- broader supervisory spans of control,
- formal recognition of non function-specific teams as organizational entities, and
- explicit and participative succession planning.

While human resources professionals may provide technical support to these activities, responsibilities for organizational design is a line-management and, in particular, cabinet-level responsibility.

Oversight and refinement of programs and controls in these six areas will provide the organizational energy to maintain the benefits of the network form and service culture.

Employee development and training are essential to enable the continual delegation of responsibility to the lowest competent level (professionalization). As new programs, systems, and initiatives are pursued, training costs must be anticipated and resources identified. Delegation of authority without increased investments in employee training and development will increase the risk of administrative breakdowns. The orientation of employees should not be constrained by function, and should anticipate functional interdependencies and employee participation in cross-functional workgroups.

Reward systems are key elements of any human resources strategy. Note that the reward system includes those incentives which are implicit in the organization's system of job classification. Current classification schemes disproportionately emphasize such factors as staff size and therefore create incentives to solve problems through staff additions. Such systems discourage the substitution of capital for labor and foster a "perform it here" culture in cases where economic analyses might suggest outsourcing or other organizational alternatives. In the network organizational model, rewards must recognize:

- influence on campus objectives,
- level of accountability,
- attainment of defined objectives,
- contribution to team efforts, and
- quality of services delivered.

Monetary rewards, where possible, should be based on merit. In addition, most studies indicate strong correlation between motivation and non-pecuniary rewards. Informal recognition programs should be established at all organizational levels. Rewards need to be tied closely to the evaluation system and to institutional service and productivity goals, and set within the network framework. Criteria for rewards might include the following:

- Suggested/developed a system or process that improved the quality, service, and/or productivity of work.
- Suggested/developed a system or process to simplify work.
- Developed a creative solution to meet the needs of a client or department.
- Assumed additional responsibility during period of staff shortage.
- Increased job knowledge by voluntarily participating in cross-training.
- Exhibited tact and diplomacy in dealing with faculty, staff, or outside community on a sensitive issue beyond normal scope of job.
- Made a difficult decision using sound judgment and reasoning and carefully weighing alternatives.
- Consistently promoted teamwork by help and cooperation outside of requirements.[38]

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# 3
# Recommendations

The preceding discussion and proposals represent neither a complete compendium of strategic alternatives available to colleges and universities as they face the next century, nor a one-size-fits-all vision of the future. Competitive success in the coming decades will depend increasingly on the integration of service-oriented business strategies with innovative and well executed academic plans and strategies. Higher education is not a monolith, and new administrative approaches such as those offered here must be tailored to the specific missions, markets, talents, and resources of each college and university as these institutions strive to flourish during changing times.

This paper does, however, attempt to identify themes and to propose strategies that attenuate or mitigate the differences between segments of higher education, and to highlight common issues and opportunities. Throughout the paper is the assumption that colleges and universities will find it increasingly difficult to isolate themselves from the broader communities they serve. Notions about service and quality are formed by faculty, students, and other constituents before they enter the academy. Such notions are in a state of flux, and expectations are rising. Future constituents—long accustomed to electronic funds transfer, zero waiting times, home shopping, and other emerging capabilities—will neither understand nor content themselves with less in their campus environments.

To meet the challenges posed by these rising expectations and environmental constraints, college trustees must vest their campus leaders with the flexibility to develop organizational forms and solutions that best reflect the specific values and needs of their institutions. To this end, the recommendations that follow are few, and are offered as guidelines for adaptation to each institution's unique situation, values, and aspirations.

✔ First, it is recommended that college and university trustees and officers seek to develop and communicate a philosophy of leadership. This philosophy should strive to establish a framework regarding risk-taking for campus employees at all levels. Campus environments that disproportionally allocate blame relative to rewards encourage risk-averse behaviors that may constrain initiative and add to administrative costs, without substantially reducing campus risks.

✔ Second, senior campus leadership should explore ways to encourage the ongoing decentralization of responsibility. Such an exploration might include a review of the institution's existing policy environment to simplify and/or eliminate unnecessary, anachronistic, or overly complex policies.

✔ Third, colleges and universities should explore their personnel policies with a view to: (1) increasing incentives for employee initiative, (2) expanding the scope of generalized job classifications at all levels, and (3) examining biases within existing classification and reward systems that encourage empire building and other bureaucratic behaviors. Personnel policies could be reviewed further with a view to creating incentives for team-related results that support broad campus goals and objectives. To achieve the goals of employee professionalization and empowerment, colleges and universities should also rethink their historical investments in employee training and development.

To achieve the promise of the network vision—while preserving those elements of campus culture that contributed to the creation of institutional excellence in the first place—college leaders will need to recognize the strategic nature of such investments in campus employees. In addition, greater emphasis on employee development, training, and succession planning will help colleges and universities develop the flow of future campus leaders during a period of anticipated labor shortages.

✔ Fourth, campus leadership should develop strategies to involve the private sector in providing appropriate administrative services. To develop such strategies, which have the potential to both reduce costs and create flexibility in an institution's cost structure, guidelines for choosing among contractual alternatives will have to be developed. Such guidelines can draw from the economics of transaction costs, but must recognize the institution's unique cultural, labor, and strategic concerns. Implicit to this recommendation is the recognition that colleges and universities need to attract, develop, and retain employees with contract administration skills and tools.

✔ Finally, and perhaps most importantly, campus leaders should recognize and endorse the need to invest in the institution's information technology infrastructure as an essential element of the overall instructional, research, and administrative strategy. Significant ongoing investments in the campus data communications network, in particular, will be an essential enabler of the network vision. Campus planners and designers should work with campus technology executives to ensure that building and inter-building designs incorporate high-speed network access to every office, dormitory room, classroom, and other logical faculty and student locales, and that funding of the campus network be considered a campus priority.

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